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# Measuring and Analyzing Child Labor: Methodological Issues

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## SUMMARY

Current statistics on child labor are generally based on economically active children. This paper will argue that these figures are not a workable proxy for data on child labor, generating numbers of child laborers and their gender composition that do not represent the group described by the international definition of child labor. This raises the question of reliable alternative ways of measuring children's activities with the aim of analyzing the incidence of child labor. The paper addresses this and proposes a child labor module that can be linked to surveys of labor force or living conditions. It also proposes some ideas for how to analyze data on children's activities and child labor.

# 1 Measuring and Analyzing Child Labor: Methodological Issues[1]

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Child labor is a complex phenomenon. Not all work done by children can be regarded as child labor in the way the term is used in this paper. Distinction must be made between child labor on the one hand and activities considered part of a natural socialization process on the other hand. Child laborers are those entering the labor market or taking on too much work and too many duties at too early an age. Definition of "too much work at too early an age" is subject to both individual and cultural differences. Basically, however, one may say: "Child labor means work performed by children who are too young for the task in the sense that by performing it they unduly reduce their present welfare or their future income earning capabilities, either by shrinking their future external choice sets or by reducing their own future individual productive capabilities" (Andvig, 2001). As will be described latter child labor may be grouped into different categories were the most important distinctions is the newly established concept of the worst forms of child labor. Another important distinction is between the working children who live in their parental household and the children who operate on their own. The latter is fare the smallest group, which methodologically needs to be addressed separately. This paper primarily discuss the measuring of the children who lives in their parents household and those living in other households (domestic workers, foster child etc.) .The effect of the work on the child also forms the basis for the national and international legislation in this area,as described in chapter two below. The paradox is that the legal definition of child labor is widely agreed on, and child labor is regulated in international conventions that are commonly accepted, but this definition is normally *not used* as a basis for collecting and sometimes analyzing child labor data. As explored in this paper, this absence of an appropriate survey methodology, rather than the definition itself, constitutes the main reason for the present lack of good data on child labor.

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The challenges in both measuring and analyzing child labor are embedded in the content of the concept. As desribed abow child labor is not defined by the activity itself as equal to work, play, going to school, or other activities that children might be occupied with, but by the effect the activity has on the child. Measuring and mapping child labor cannot therefore be accomplished by copying the methodology used, for example, in measuring adult employment. Nevertheless, this is exactly what is normally done today by using labor market participation as a proxy for child labor as shown in chapter two, which contains a closer look at the main sources of child labor data.

Child labor research must take place in three steps. The first concerns determination of which activities should be defined as child labor. This type of research is an ongoing process, identifying levels and circumstances under which activities become a potential threat to a child's development. However, as described in chapter two, a basic understanding of what should be regarded as child labor exists, and it is reflected in the national and international regulations.

The second step is, given the knowledge of what type of activities are to be considered child labor, finding out how many and which children fall within this group. This includes developing a proper methodology for collecting the necessary data and proper analytical tools. This question is addressed in chapter three which concludes that improvements are needed in this area—in applying knowledge of what type of work or activity may interfere with the child's development as the basis for determining the number of child laborers and analyzing the results. A gap exists between what is actually known regarding child labor, , and the use of this information in data collection and analyses. The logistical difficulties in measuring child labor should however be recognized. Already mention is those children not resting in a household or hidden away by employers etc. Other problems is the households interpretation of the concept of child labor and sometimes reluctance to share information given that this in many cases will be illegal.

The third step, addressed in chapter four, is to analyze the wider consequences of child labor on the household and the society. Such analysis, were the child laborers are identified from children not doing "too much work at too early an age", can also be used to analyze why children work. Both types of analysis is today seriously handicapped by the lack

of accurate data. For comparative research and international policy development, providing better data is essential. Examples of extensive child labor surveys enabling analyses based on the definition of child labor are available (se for example ILO/SIPOC surrey on Child Labor in Zimbabwe), but they are few, and time series are virtually nonexistent. The objective must therefore be to develop a set of questions that satisfies the need of the researchers but that at the same time can be added to regular household surveys, in particular labor force surveys, thus ensuring a building up of both time series and comparable international data. Why should child labor data be improved? With the present inadequate data, too little is known about many important aspects of the child labor phenomenon at both national and global levels. Inadequate knowledge of the phenomenon, reduces the quality of the analyses that form the foundations for interventions. The better child labor is understood, the more precise action can be taken and resources more effectively used to reduce it.

## 2 WHAT IS CHILD LABOR?

Child labor has been on the international agenda since the 19th century. As the concept of childhood has developed and been made universal, so has the demand for some sort of regulation of child labor. The first attempt to define child labor in an international convention was made by the International Labor Organization (ILO) at its founding congress in 1919. From this first convention (settling on 14 years as the minimum age for public and private industrial undertakings) to the adoption of Convention 138 in 1973, a gradual development of the concept took place (including more and more industries and types of work and raising the minimum age). The idea was to determine which activities children should not be allowed to undertake in the labor market. Hence the ILO definition was originally based on the child's relation to the labor market. A more comprehensive approach was taken through the adoption of the UN Convention on the Rights of the Child (CRC) in 1979, in which the definition of child labor was based on the effect that the work may have on the child, regardless whether this work could be characterized as labor market work. This child's rights principle was adopted by the ILO in 1999 through Convention 182 (C 182) on the Worst Forms of Child Labor. These three conventions, ILO Convention 138 (C 138), the UN Convention for the Rights of the Child, and ILO Convention 182 on the Worst Forms of Child Labor, form the basis for the international definition of child labor.[2]

The conditions set forth in the three conventions are of a qualitative nature (see appendix I). The work or activities undertaken by a child, defined as a person under the age of 18, should not be hazardous or harmful to the child's health or physical, mental, moral, or social development. In addition, for children of primary school age, the work or activity should not interfere with the child's education. However, since the qualitative conditions for child labor are difficult to translate into exact measurable figures like the number of hours worked, some guidelines are necessary in order to develop workable protection instruments. Part of this is left to the national legislators to decide. Both the ILO Conventions (C138 and C182) request national governments to list what they defend as hazardous child labor. But

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2 The CRC has been ratified by all UN members except Somalia and the United States. Convention 138 itself has been ratified by approximately 70 states. It forms a part of the so-called ILO Core Conventions, which all ILO member states have committed themselves to respect regardless of ratification (ILO 1998).

further to this and in order to make the qualitative definition operational, general age limit conditions are constituted (in C 138).[3] There are various age limits, depending on the kind of work, on when compulsory education normally ends, and on whether the country is developing or industrialized.

ILO Convention 138 defines three critical ages.[4] First, there is a general definition of a child as a person less than 18 years of age. No person under 18 should undertake work that includes health-threatening or hazardous activities. Second, the minimum age of legally entering the labor market as a full-time worker is set to 14 years of age for developing countries and 15 in other countries. In all cases full-time work must begin only after the age of completing compulsory education. Third, the minimum age for entering the labor market doing light work is set to 12 for developing countries and 13 in other countries. At this age the child can do some work outside of the household, provided that it does not interfere with schooling. The child may also enter into vocational training. If a child is under 12–13 years of age, he or she should not be active in the labor market, but may still undertake duties within the household or under the guidance of the parents and as a part of the socialization process, provided the work does not interfere with schooling or pose a threat to health. Figure 1 gives a graphic illustration of the definition of child labor.

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3 The Convention on the Rights of the Child calls for minimum ages to be implemented but does not specify them. However, through the work of the UN Committee for the Rights of the Child, the reference in the CRC to relevant international standards on minimum age for employment has been interpreted as ILO Convention 138. ILO Convention 182 on the Worst Forms of Child Labor covers all children under the age of 18; this convention refers to ILO Convention 138 as the basic child labor convention.

4 The concept of general age limits has been criticized by some researchers. Judith Ennew (1997) put forward the view that this is based on speculative use of documentary evidence based on the folk model of childhood in industrialized countries.

**Figure 1.**
**International definition of "child labor"***

| | | | | |
|---|---|---|---|---|
| Up to age 18 | Dangerous or hazardous work | Full-time work | Light work in the labor market; vocational training | Light work in the home under the guidance of the parents and as a part of the socialization process, provided the work does not interfere with school or threaten health. |
| Up to age 14/15 or the age of completed compulsory education (if higher) | | | | |
| Up to age 12/13 | | | | |

*activities listed in gray areas are considered child labor, activities in white areas are not

This definition of child labor and the worst forms of child labor is as describe the result of many years of international cooperation in this field. The definitions do leave several questions open but never the less provides us with the tool needed to map and analyze child labor. Some academics have questioned the definition[5] but in the research community in general (se for example Rodgers, G., and G. Standing. 1981) and among national and international stakeholders the three conventions command strong support.

**The Present Statistics On Child Labor**

Statistics on children's activities is provided through several sources. Most important is The ILO and its Statistical Information and Monitoring Program on Child Labor (SIMPOC), the World Banks Living Standard Measurement Surreys (LSMS) and the UNICEF Multiple Indicator Cluster Surveys (MICS). All have been used to quantify the numbers of child labor and/or analyse child labor.

The International Labor Organization, has provided several data sets on child labor and even some global estimates also prior to the establishment of SIMPOC, of which two figures often are cited. One is that the number of child laborers globally is 78.5 million; the

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other is that the number is around 250 million. The first figure originated in 1990, when the ILO Bureau of Statistics published an estimate based on labor market data adding up the number of economically active children in 124 of 213 countries and territories (ILO, 1993). Being economically active or in the labor market is, as mentioned above, not the same as being a child laborer. To be defined as economically active, a person needs to have worked one hour or more in the reference week or to have been searching for work. Work here excludes so-called nonmarket or noneconomical production or work, such as housework. This group of houseworkers is therefore grouped in labor statistics under the noneconomically active population. In addition it is worth noting that the ILO figure of 78.5 million for the incidence of child labor came about only as a sum of the data available and was not extrapolated to represent a true worldwide estimate. Moreover, the surveys on which the statistics were based had different minimum cuts of ages. As a result, 70.9 million of the child laborers were found to be between 10 and 14 years of age. That amounted to 13.7 percent of the children in this age group in the countries surveyed (ILO, 1993).

In 1995 the ILO published a new figure based on labor market surveys where working children had been specially surveyed, including four so-called experimental surveys (Ghana, India, Indonesia, and Senegal)—still using, however, the number of economically active children as a proxy for child laborers. Of children between ages 5 and 14, 12 percent were found to be working full time and an equal number working part time. Among the full-time workers, boys were found to outnumber girls at a rate of three to two. Based on this 12 per cent estimate it was extrapolated that in developing countries alone, at least 120 million children between the age of 5 and 14 are in full-time work; the figure climbs to 250 million if those in part-time work are included (ILO, 1995).

Only recently, at its Sixteenth International Conference of Labor Statisticians in 1998, did the ILO discuss in more depth the concepts, definitions, measurements, and classification of child labor. The conference did recommend that work of a domestic nature (household chores) performed by children in their own parents' or other relatives' home where they actually reside should be included in the investigation of children's schooling and nonschooling activities. This would identify those children who are working more than the number of hours a day that may be considered as normal to learn common household chores

and related activities—that is, child laborers. It was recommended, however, that the final data compiled on these children should then be tabulated separately from the data relating to children who are economically active (as defined in accordance with international standards). The recommendation is that nonmarket work of a domestic nature in the parent's or guardian's household would then be classified and tabulated into various ranges according to the number of hours that such work was performed so that a threshold could be established beyond which the activity could be deemed as constituting child labor. This would bring important but not sufficient improvements in the data on children's activities. Information on schooling, for example, would still be missing.

ILO took however a further important step by launched its Statistical Information and Monitoring Program on Child Labour (SIMPOC) in January 1998 as an interdepartmental program to help member countries generate comprehensive, reliable and comparable quantitative and qualitative gender sensitive data on child labor. The overall objectives of the SIMPOC include developing standard indicators of child labor at the national level, and to measure the incidence, causes, and consequences of child labor as well as the impact of intervention programs and policies.[6]

Labor market participation rates for children are not only collected in specially designed surveys , but in a set of different types of household surveys, many of which serve as sources for child labor data. A typical such household survey is the World Bank's Living Standard Measurement Surveys (LSMS), The main objective of the LSMS is to collect household data that can be used to assess household welfare, to understand household behaviour, and to evaluate the effect of various government policies on the living conditions of the population. Accordingly, LSMS collect data on many dimensions of household well-being including consumption, income, savings, employment, health, education, fertility,

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[6] Under the SIMPOC program, the ILO has also looked at methodology for supplementary approaches to the household-based survey. This includes a community/town/village level survey (key informants), employers and workplace surveys, a street-level child labour inquiry and a Rapid Assessment Methodology. The Rapid Assessment (RA) methodology is a joint ILO-UNICEF approach.

nutrition, housing and migration. The information on children's activities is colected through a labor module in which work activities are recorded based on the standard definition of adult labor market participation mentioned above. In addition the LSMS surveys record the child's current school enrollment status and sometimes the hours spent at school, hours in labor market work, and hours in doing household work. Normally it is only possible to divide children into four groups: children only attending school, those combining school and labor market work, those only in labor market work, and those neither working nor in school. Without additional information on the hours spent on each activity and the potential health threat posed by the work activities, it is not possible to extract the number of child laborers from a LSMS survey. In addition the surveys often are based on a relatively small sample, making it difficult to analyze characteristics present in only a part of the sample. The fact that LSMS surveys mapping all types of children's activities have only been undertaken in a handful of countries and seldom repeated makes this source of information from the World Bank insufficient for extrapolating any worldwide estimates on child labor.

The point of departure for the third mains source of child labor data was the World Summit for Children Declaration and the Plan of Action for Children, which committed the governments who signed to monitoring progress toward the goals and objectives set for the year 2000 including the elimination of child labor. The Plan of Action called for each country to "establish appropriate mechanisms for the regular and timely collection, analysis and publication of data required to monitor social indicators related to the well-being of children".

UNICEF's initial monitoring strategy was to collect existing data from various sources. But it was recognized that current data on key indicators for assessing progress were lacking for many countries. In response, UNICEF developed the Multiple Indicator Cluster Survey (MICS) as a household survey tool for countries to adopt in order to fill data gaps.
The focus of the MICS surveys is on a number of child welfare indicators including infant mortality, education, water and sanitation, malnutrition, immunization, health, childbirth, birth control and child labor. The surveys include questions on children's work in their own

household (non market work). A global estimate on child labor based on the MICS survey is not yet (summer 2001) published.

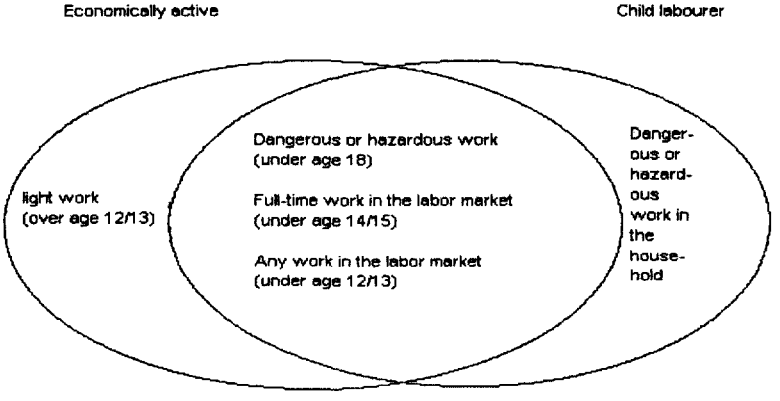
An additional source of data used to estimate child labor has been primary school enrollment figures. Use of these data is based on the notion that child labor is defined as work that interferes with primary education; hence all children who are not in school may be considered qualifying as child laborers. A worldwide provider of such data is UNICEF. According to UNICEF statistics (UNICEF, 1999) something like 130 million children of primary school age are not in school, equivalent to 21 percent of the children in this group. [7]

When data on economically active children has been used as a proxy for child laborer one reason will be that this is the only available figures in may countries However two kinds of discrepancy or measurement error relative to the internationally agreed definition of child labor occur from the analysis of child labor based on the data such as the labor market statistics from the ILO, the LSMS living condition surveys. First, many children worldwide, especially girls, never start school or drop out at a very young age. Most of them do not enter the labor market, but perform domestic duties in their own households. Child laborers working in their own household will be excluded from the statistics of working children as long as standard labor market statistics draw a distinction between market work (economic activities) and nonmarket work (noneconomic activities) in such a way that if a person is undertaking activities like caring for animals and fetching water for irrigation, he or she is regarded as working or economically active, while if a person is undertaking activities like caring for siblings and fetching water for cooking, he or she is regarded as not working or noneconomically active (ILO, 1990). The second type of measurement error goes the other way. A child above 12–13 years of age who works, for example in the family shop or on the family land, but combines work and school in such a way that school performance does not suffer and otherwise is not exposed to dangerous working conditions, is not a child laborer according to the definition. But this child will be recorded as economically active by the ILO

[7] The figure is based on UNESCO statistics were primery school age is defined according to national legislation in each country (which vary fram 5 to 7 years of age for enrolment and 4 to 7 years duration).

survey methodology and therefore included in the statistics. The two measurement errors can be summarized as shown in figure 2.

**Figure 2.**
**Measurement errors when using labor-market participation rates as a proxy for child labor**




The following illustrations from Cote d'Ivoire, Pakistan, and Peru may exemplify this measurement and analysis problem. From the 1988 household survey data in Cote d'Ivoire we learn that in the age group 7 to 14, 28 percent reported attending school only, 32 percent combined school and work, 18 percent only worked, and 21 percent were performing household tasks or doing "nothing" (Grootaert, 1998). We must assume that among the 21 percent performing household tasks or doing nothing, a portion of which are likely to fit the definition of child labor. On the other hand, many of the 32 percent who combined school and work probably fall outside the definition. The total number of child laborers in Cote d'Ivoire may not be very different from the combined number of full- and part-time economically active children. But since the girls outnumber the boys two to one in the group performing household tasks or doing nothing, the present gender parity in the child labor statistics in Cote d'Ivoire would probably shift toward a female majority if measured according to the definition.

Using the standard definition of economically active children in Pakistan, the ILO (1996) found that 3.3 million children were working full time—equal to 8.3 percent of all children aged 5 to 14. Of those, 73 percent were boys. However, the latest UNICEF figures (1999) show a net primary school enrollment of 66 percent (a majority of which were boys),

Even if these two figures are not from the same year it shows the shortcomings in the present data on child labor. Here we are left with a large group (close to 30 per cent) of the children in primary school age doing "noting". In this group a large majority is girls. Given what we know about childrens activities in Pakistan, the ILO figures probably represent a gross underestimation of the number of child laborers. Furthermore, they most likely give an incorrect gender composition in the sense that the majority of child laborers in Pakistan probably are girls.[8]

The 1994 LSMS survey in Peru shows that 96 percent of the children ages 6 to 15 go to school. Only 2.8 percent reported work in the labor market as their sole activity, and only 1.5 percent reported household work as their only activity. However, 16 percent of the girls and 22 percent of the boys combine school with work in the labor market (Sasaki and Temesgen, 1999). Thus the large majority of the economically active children attend school. Using the combined number of full- and part-time economically active children as a proxy for the number of child laborers would therefore probably overestimate the existence of child labor. Nevertheless, of all children surveyed, 5 percent of the girls and 1 percent of the boys did report doing more than 35 hours of housework per week, indicating that some of the children who go neither to school nor to work and some of those who are described as only going to school should be regarded as child laborers. If this assumption were correct, the gender composition of child laborers most likely would change from a majority of boys to something closer to parity.

If these examples are representative for all countries, in countries with a low primary school enrollment rate the figures of economically active children will tend to be less than the number of child laborers. In countries with a high primary school enrollment rate the combined figure of full-time and part-time economically active children will tend to overestimate the number of child laborers. If all of the 130 million children who are not in primary school worldwide are at risk of being child laborers, this equals approximately 21 percent of the children in this age group. Compared with the 12 percent of the children in the

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8 According to the data given in the 1995 annual report of the Human Rights Commission in Pakistan (HRC 1995), "Child labour is estimated conservatively to be around 8 million but more realistically in the region of 11 to 12 million. Just girls under 12 doing labour in the cities number over one million."

same age group working full time in the labor market according to ILO statistics, the number of child laborers working in the household could at maximum be close to the number in the labor market. At the same time quite a number of the part-time economically active children found in the ILO statistics cannot be regarded as child laborers. This should lead to a global figure of full time child laborers somewhere between 12 per cent of the children (percentage of full time economically active children) aged 5 to 15 and 21 per cent (the percentage of children not in primary education). In addition to this will be part time child laborers. The gender composition of the child laborers would most likely not be, as stated by the ILO, a majority of boys, but would instead be mostly girls.

This measurement error is a significant problem, affecting results in both magnitude and gender composition. Possible national action and international aid aimed at reducing child labor may be put to work in a less than optimal way if it is guided by the present statistics. The growing literature on child labor shows how these inadequate data are used as a basis for both analytical and practical-oriented publications. The OECD, for example, in its "Trade and Labor Standard" survey of 1996, based its analyses of child labor on the ILO figures of 78.5 million child laborers (OECD, 1996). The problem with these data is to some extent debated in the child labor literature. In UNICEF's *State of the World's Children 1997*, focusing especially on child labor, the ILO figures from 1990 are mentioned, but the report notes that, on the basis of the definition of child labor, around 90 million children (mainly girls) in India alone should probably be added to this figure (UNICEF, 1997). In the paper "Child Labor, Issues and Directions for the World Bank," the above-mentioned ILO data on 120 million full-time and 250 million part-time workers form the basis for the analysis. The authors do, however, add: "Differences in child labor between boys and girls are masked by measurement problems, as boys are commonly in more visible types of employment while girls work in unpaid household work" (World Bank, 1998). The World Bank paper "Child Labor, A Review" states: "There is no systematic data collection on child labor" (World Bank, 1995). This paper is one of several where the authors' examine, in addition to data on economically active children, other indicators like the number of children not going to school. Returning to the problem of inadequate data for policy making, the ILO itself, at the International Conference on Child Labor in Oslo in 1997, presented indicators of child labor

in countries where national surveys were conducted. Of children aged 5 to 14 years, 27 percent of the boys and 22 percent of the girls were working. Working girls were more likely to attend school than working boys, and the boys were working longer hours than the girls and in more hazardous occupations (ILO, 1997). As shown above, these findings are more the result of the way child labor is measured by the ILO than an actual reflection of the situation on the ground. When presented as the basis for policy making, as was the case at the Oslo Conference, they may therefore create confusion and distort the real proportion of the problem.

Similar type of concerns can be raised with regard to cases where child labor is linked to the international trade agenda, as in the case of the U.S. and EU General System of Preferences. Here developing countries are asked to reduce their level of child labor in exchange for lower tariffs for goods entering the U.S. and the EU markets respectively. Both the United States and the EU are however using figures for economically active children as the yardstick (Grimsrud, 1998b). UN bodies like the Committee on the Rights of the Child and the Commission on Human Rights, Working Group on Contemporary Forms of Slavery, also use the number of economically active children as the basis for their analyses of child labor (UN, 1994). The possible policy consequences of the present situation may be summed up in three major areas of concern:

- To reduce the apparent incidence of child labor in the fastest possible way, it is only necessary to shift children from a type of child labor that is counted to a type that is not presently counted.
- Resources spent on reducing child labor may be disproportionately allocated toward the forms best captured by the statistics, and the possible gender bias toward boys makes this an even more serious concern.
- Defining child labor as equal to economically active children leads to a gap between the type of actions needed to enforce the law and the type of actions leading to changes in the statistics. A child over 12–13 years of age might legally work a couple of hours a day, but he or she might be denied this in order to help reduce the number in the statistics. This may undermine public support for putting an end to child labor.

# 3 DATA NEEDED TO MEASURE CHILD LABOR

To measure child labor, given that it is not an activity equal to work, play, going to school, or other activities that children might be occupied with, but an activity defined by its consequences, these qualitative conditions must be translated into measurable parameters. To a large extent this is done by the international conventions themselves, which set age limits and specify sectors and activities that should not be undertaken by children. Still undefined, however, are critical values for measuring light work, hazardous work, and work performed at the expense of education.

Improving the statistics on child labor requires development of a set of questions that can be used in a child labor module in several types of household surveys. Looking at the existing tools, including both living condition and labor force surveys, practical ways need to be found to:

- measure all types of activities undertaken by children including the time spent working in both productive and nonproductive (domestic) work;
- map the nature of the work in order to determine if the child is engaged in any health-threatening activities;
- map school attendance and performance and measure the time used at school

The main differences from today's practice will be to:

- ask children not only if they worked for one hour or more during the preceding week, but for how many hours they worked and what work they did;
- include the same questions regarding household work;
- record not only the type of industry or profession but include a broader description of the work;
- add adequate questions on school attendance and performance.

The age of children included in this section would have to be as low as five years, or the age of starting primary school. Some child labor modules for use in conjunction with different household surveys have been developed already.

**A Child Labor Survey Instrument**

The challenge in designing a survey instrument will always be to gather as much information as possible through a very limited number of questions. Important information will, however, be collected in other parts of the household survey, making it possible to combine the basic information collected on child labor with other relevant information. Household surveys on general living conditions can be suitable for looking into child labor and issues like family income and welfare, health, and access to facilities like water and fuel. A labor force survey may make it possible to look at intrahousehold sharing of work and tasks and also at the demand side of child labor for wages. Special child labor surveys may be extended to cover the particulars of the employers of children working outside the household, the children's present or former teachers, and representatives of the community (see, for example, Grimsrud, 1998a or ILO, 1995). This paper, however, will concentrate on the very basic issue, ensuring that enough data are collected to identify the child laborers.[9]

*Age And Respondent*

The age span to survey may depend on the purposes of the survey, the minimum age for employment, and the age for completing compulsory education in the country concerned. For international comparability the child should probably be defined as a person between 5 and 14, 15, or 18 years of age.

An important question is whether the children themselves should be interviewed or if the parent should be used as a proxy. This has methodological implications and might require resources that are not available. Questions may be asked of parents, children, or both. Experience has shown that the mother may be better informed about the activities of the children than the father is. This is why questions on children's work activities might be better placed in a mother-and-child module rather than in a labor module, which is often addressed

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[9] The ILO under the SIMPOC program has developed a module to be attached to labor force surveys.

only to the head of household for all household members. The best is of cause to interview the children themselves. This creates a problem regarding the youngest children, included in "those below 10 to 12 years of age." It is not likely that these children will be able to respond properly on their own. The presence of an adult may influence the answers given by the child. In any case the survey should record whether the child is answering for him or herself. The special difficulties attached to interviewing children must not be underestimated. The notion of what is work and what is not work is, for example, different within different cultures and between individuals, and children especially can have very different notions of what they do. A typical answer from a child might be that on a given day he or she did nothing. This response could mean anything. In order to enumerate and quantify the activities of children, one must go beyond this and get the child to explain more specifically.

*Mapping The Children's Activities*

All types of activities (schooling and nonschooling, economic and noneconomic activities) of children need to be enumerated, and the volume or workload of their activities quantified, so that the assembled statistical information can be cross-tabulated by the different characteristics of the variables included in the questionnaire.[10] It is likely that a child will participate in several activities and sometimes even hold more than one job outside the household.

To the extent possible both the "current" and the "usual" activity of children should be mapped, the first in reference to activities during the reference week, and the second in reference to the 12-month period preceding the inquiry date. The latter is important for taking account of seasonal variations, which are characteristic of a considerable proportion of children's activities, including schooling.

Measuring use of time is both difficult and time consuming and children's use of time has its own special hurdles. One disadvantage with most of the techniques is that the method

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10 One useful categorization is provided by Gerry Rodgers and G. Standing (1981). They classify the different activities of children into nine groups: household work, nonhousehold work; nonmonetary work (unpaid work in subsistence economies, farm work); tied or bonded work; wage labor; marginal economic activities; street trade; rag picking and other forms of irregular, nonformal, short-term economic activities (including theft, prostitution, and other illegal activities); schooling; idleness and unemployment; recreation and leisure and reproductive activities; washing self and cloths; eating; and so on.

requires the child and/or parents to recall information, opening the way for selective memory and socially desirable biases. The ILO (1996) reports that its survey experiment based on asking children to recall the time spent over the past three days from a list of different activities was not so successful for the purposes of investigating children's activities and the intensity of their work. Even when presented with a long list of economic and noneconomic activities, many children could not recall the activities in which they had been engaged during the 24 hours preceding the date of the survey. And even when they were able to identify the activities, they had little recollection of the amount of time spent on each. Most children seem to remember only those activities that they liked most, especially those in which they made "good" earnings.

For including child labor measurement in labor force or living condition surveys, the best compromise between need for information and capacity to collect it may be to use a basic activity list, asking direct questions about how much time children spend on specific activities. The advantage of this method is that it is very cost effective, and many instruments have already been developed and tested in previous surveys. A time diary is, however, perhaps a better way to capture all the data required for analyzing time allocation and should be preferred in the special child labor surveys. A two-fold approach, combining asking the child questions about time spent on specific activities such as school and work outside and within the household and using a time diary, may also be one solution. For more on time use, see appendix II.

One aspect of time use for children is the link and interaction with adult activities, in particular the link between labor supply of children and adults. Since the demand for child labor is intertwined with the demand for adult labor, the analyst would be helped by information on the activities of both adults and children. General household surveys will cover many of these characteristics of the household—fathers' and mothers' work and education status; number, age, and gender of siblings. Therefore surveys should make certain to link every child to his or her parent in the household by ID code, identify orphans and foster children, and obtain information about their parents for children whose parents are dead or absent.

*Health-Threatening Work*

To be able to analyze whether the recorded activities represent some special health threats to the child, the activity needs to be described more closely. Almost every working environment involves one or several health and safety hazards. Occupational hazards may be difficult to identify and can have different health consequences for different workers. Chemical, physical, biological, and stress hazards are found in the workplace in combination, and their adverse effects are often cumulative, causing occupational accidents and diseases. These factors create special challenges in measuring children's occupational health environment. In addition, children differ biologically from adults in their anatomical, physiological, and psychological characteristics because of their process of growth and development. These differences may make them more susceptible to occupational hazards in the workplace than adult workers, and the health effects can be more devastating for them, causing irreversible damage to their physical and psychological development, including permanent disabilities, with serious consequences to their adult lives. The same work environment that adult workers regard as safe may constitute a heath-threatening environment for the child. It is further important when collecting health data to include not only accidents, injuries, and illnesses suffered and their frequency and gravity, but also to try to map the potential threat to the child's mental heath and normal development.

Since most children work outside the formal labor market, defining the workplace for children may be difficult. The best example of this is housework, which is considered child labor if it affects the child's health development or school performance. Hence it becomes difficult also to talk about occupational heath for children. So a more general approach is needed, measuring the child's general heath status and asking if the children in general are exposed to situations that may pose a threat to their heath.

One of the weaknesses of the household survey approach in regard to health and safety is that even if surveyors ask concretely about health threats, it is the child's and/or parent's anticipation of the situation that is measured. In a special child labor survey this can be addressed by interviewing employers or teachers and even actually observing the activities of children, but normally this may not be possible. Such traditional nutrition measurements as height and weight or mid-upper-arm circumference thus provide vital information about the

working child's health situation. Both these measurements are, however, more difficult to interpret for the age group 5 to 18 than for any other age group given the large individual differences in growth pattern among children in this age group.

*School Attendance*

Proper measurement of the child's education performance is essential in identifying the child laborer. Information on the child's school history and, for those still in school, performance are thus necessary. Performance will include such observations as whether the child follows normal progression, does not have to skip school or homework regularly because of work, if, for example in the peak agricultural seasons, the work conflicts with attending school. In this respect the number of years of schooling constitutes perhaps the most important data, but daily school attendance clearly matters as well. Weekly and yearly school hours and time should also be mapped. Repetition indicates whether sufficient learning is occurring and also affects learning directly. It may be an indication that the child is bearing too heavy a work burden outside school.

For those going to school, data gathered should include something about the quality of the education. One indicator of quality is the number of pupils in the class; others might be material inputs in the classroom, such as blackboards, textbooks, and the physical condition of classrooms, teachers' characteristics, and pedagogical practices.

The distance between home and school and fees and all other costs associated with attending school, such as books, uniforms, transportation, additional private tuition, and gifts to the teacher, should be mapped. Capturing all these other costs are important. The price at which uniforms are available can affect children's schooling outcomes, particularly if government schools require uniforms. Similarly, if the school does not provide textbooks, the price of these textbooks will also affect households' schooling decisions. Parents may withdraw their children from school or send them to school without a full set of textbooks. The same applies to other learning materials that parents are expected to purchase. Distance can also be viewed as a price; parents may be discouraged from sending their children to school due to the high opportunity costs of the children's time spent traveling to school and, in some cases, direct transportation costs. In many developing countries, many communities are a great distance from schools, especially at the secondary level.

The total cost to a household of enrolling a child in school includes not only the sum of the direct money costs, but also the opportunity costs of the time that children devote to schooling. This cost may vary throughout the year, being higher in the peak agriculture seasons, for example. This is central in measuring and analyzing child labor. The data collected on time use of the child in combination with information on the activities and work of other household members shed light on this.

If children are not going to school, why are they not? There is a growing focus in the literature on child labor on the so-called push-out reasons: no school in the village, bad school performance; not liking the teacher, and not finding the teaching relevant are reasons for not going to school (see for example Burra, 1995). It is of course sometimes difficult to distinguish these from the traditionally given reasons for dropping out, such as the need to work to help the family and the need to support the family financially. The child's or parents' understanding of the situation, which is what is actually measured, can also reflect what is socially acceptable or believed to be the right answer to such a question.

*Other Questions*

Even if the primary objective of a child labor module in a household survey is to determine the level of child labor, some information helping to understand the reasons, context, and welfare implications should also be included. One such area is the demand side in respect to those children working in the labor market. Additional information could include if and how they are remunerated, and why and at what age they took up work outside the household. For more questions and elaboration on questions that could be added to a child labor module, see appendix III.

One of the problems with household-based surveys is that they tend to exclude homeless children who live and work on the streets with no fixed place of usual residence,

and for this reason they do not give a complete picture of child labor at the national level.[11] Nevertheless, household-based surveys will capture the overwhelming majority of child laborers. Another group is children put under the guardianship of relatives or other persons. These constitute a problem, being especially susceptible to much abuse in these areas of work. Behind the guardianship status there are often other arrangements, which amount to child labor, including bondage, which is among the worst forms of the practice. Mapping all children in the selected households, including those not being the children of the head of household, may include some of these children.

This section has identified the minimum of information needed to measure and analyze child labor. Figure 3 gives an example of such a child labor module that could be added to a household survey. In the development of all such survey instruments, compromises need to be found between the number of questions one may be able to include and the number of areas one would like to address. In the last part of this chapter some of the questions that are highly relevant but not essential for collecting data on the number of child laborers are debated further. The list in figure 3 exceeds what is normally collected in household and labor force surveys on child labor, and it would be an important step in the direction of getting better child labor data to have such a minimum number of questions asked regularly through households surveys, in particular in labor force surveys.

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11 Homeless children are found mainly in the urban core, working either independently on the streets or for operators of various activities in the informal sector. Most of them have no fixed place of work and may sleep outside buildings with no permanent or even usual place of residence. During the daytime these children may continuously be on the move from one place to another. For the children on the streets (children not residing in a household), a purposive approach may be applied—visiting children in their localities in the evenings, and even at night if that proved to be more convenient.

**Figure 3.**
**Check list for questions in a child-labor module of a household survey**

| | | |
|---|---|---|
| All | Child's name | |
| | Age | |
| | Identification number from household roster (or other type of identification making it possible to identify parents and siblings) | |
| | Who accompanies the child during the interview?<br>No one Mother Father Others | |
| | **Work activities** | |
| All | During the *past week* (past 7 days) did you work (understood to include all relevant work and work-related activities) or help your relatives or others in their work outside the household, in a family business, or agriculture (working the land or with animals) or with home production for sale?<br>If Yes, for how many hours? | |
| All | During the *past week* (past 7 days), did you work under any form of apprenticeship or other forms of vocational or work related training?<br>If yes, for how many hours? | |
| All | Do you have a job or duties outside or at the family farm from which you were temporarily absent last week due to illness, holidays, temporary layoff, seasonally of work, or other reason? | |
| | **Household work and activities** | |
| All | Did you spend some time during the past week (past 7 days) doing house work/domestic duties such as collecting water, food preparation, housekeeping, washing clothes, or taking care of children, etc.?<br>If yes, for how many hours? | |
| | **Seasonal variations** | |
| All | Did you spend some time during the past year (past 12 months) doing work or help your relatives or others in their work outside the household, in a family business, or agriculture (working the land or with the animals), or with home production for sale? | |
| | **Type of work or activity** | |
| All | What kind of work or tasks do you undertake both outside the household and in the household. Describe the nature of the activity, what type of work and where it takes place? | |
| | If working outside the household, in what kind of business or industry do you work? And what is your employment status? | |
| All | Are you requested to operate any tools or machines at your work? | |
| All | Are you working with/exposed to any chemicals (including pesticides) in your work? | |
| Al | Are you paid for you work? In cash or kind or by adding your parents' or others' remuneration?<br>If yes, how and approximately how much per week? | |
| All | Do you sometimes, always, or never feel pain from your work? | |
| | Have you over the past year had any accident or illness related to work outside your household? | |
| All | Have you over the past year had any accident or illness related to (unpaid) housework? | |
| All | Measure the child's mid-upper-arm-circumference | |

**Figure 3. (cont'd)**
**Check list for questions in a child-labor module of a household survey**

| | | |
|---|---|---|
| All | Child's name | |
| | Age | |
| | **School attendance** | |
| All | During the *past week* (past 7 days), did you attend any form of school?<br>If Yes, for how many hours? | |
| All | During the past year (12 months), did you attend any form of school?<br>If Yes, for how many months? | |
| | If no, have you ever attended school or training? | |
| | What are the main reasons why you dropped out or never attended school?(If more than two reasons identify the most important ones):<br>a) To young,<br>b) disability,<br>c) can not afford school fees or other costs associated with going to school<br>d) family disintegration,<br>e) no suitable school or training institution available<br>f) need to care for family members,<br>g) need to work in order to help family economically,<br>h) bad treatment at school, asked to leave school by the teacher, don't like going to school<br>i) left school for marriage<br>j) family do not want the girl to go to school<br>k) other reasons | |
| | **For those who are or have been attending school or training:** | |
| | For how many years did you attend school altogether? | |
| | What is the highest grade you have completed in school or in what grade are you currently enrolled in school? | |
| | At what age did you start in primary school? | |
| | Have you ever repeated a grade of school?<br>If yes how many times have you repeated a grade of school? | |
| | How long does it take you to travel to your school one day both ways? | |
| | **For those who are or have been attending school or training:** | |
| | How much has your household spent on your education in the past 12 months?<br>a) tuition and other requested fees?<br>b) uniforms and other clothing?<br>c) Textbooks?<br>d) other education materials (pens, exercise books, etc.)?<br>e) meals and lodging?<br>f) Transportation?<br>g) other expenditures (extra classes, optimal fees, gifts for teachers, etc.)? | |
| | Were you often, sometimes, or never absent from school because of work outside the household in the family business or at the family land last year? | |
| | Were you often, sometimes, or never absent from school because of housework/domestic duties last year? | |
| | Did you often, sometimes, or never have to skip school homework or studying due to (unpaid) housework/domestic duties last year? | |

**Figure 3. (cont'd)**
**Check list for questions in a child-labor module of a household survey**

| | | |
|---|---|---|
| All | Child's name | |
| | Age | |
| **For those working in the labour market** | | |
| | | |
| | What are the main reasons for you working outside the household?<br>a) Completed compulsory education<br>b) Dropped out of school<br>c) No school in the neighbourhood<br>d) Don't find the school relevant<br>e) Need to take care of siblings at home/take part in housework<br>f) Need to help at the family land/plot<br>g) Left school to help my family in the agricultural season and could not return to school<br>h) Could not afford going to school<br>i) My family needed my income from work<br>j) My work is needed to fulfil my father/mother (or other family members' piece work contract<br>k) Other; please specify | |
| | How old were you when you started working outside the household for the first time | |

In linking the child labor module to a labor force survey, the questions on children's work may be considered to be taken out of the labor market part of the questionnaire and made part of the child labor module.

Surveys must exercise caution in using the expressions "child labor" and "work" in questionnaires, since the understanding of their meaning may differ both between individuals and in different cultural contexts. Girls' work activities in particular are often underreported due to specific interpretations of what constitutes "work." (See Grimsrud, 1998a).

*Analyzing The Data*

The challenge of gaining a better understanding of child labor rests not only on obtaining better data but also on analyzing the data more effectively. Given the definition of child labor and data mapping the children's activities, identifying the child laborer still depends on analysis of the data. Does the child carry out work, duties, or activities that constitute a health risk and, for children under 14–15 years of age, is this work carried out at the expense of the child's education?

Being economically active or in the labour market is, as mentioned above, not the same as being a child labourer. Nevertheless, it might be useful to use this concept as a point of departure. But even in identifying the economically active children we have problems because children usually work in their own household or at the family plot (more than 80 per cent of economically active children do so). Even those working outside the household will in most cases work together with their parents or other family members. Such children help for example a parent employed in the fields of large farms or plantations to fulfil a production quota or assist in the family business, and hence will not be directly receiving wage. Only a relatively small number of children are employed directly by an employer.

Analysing on the ILO and World Bank/LSMS data sets one should be aware the way that questions are posed ant the definitions behind. The ILO, for example, defines work as something you do in return for any kind of remuneration, while UNICEF defines it as something you do for pay or not, for persons not belonging to your own household. Both the ILO and LSMS use the adult labour market categorisation for children, i.e. the terms 'paid wage labour,' 'unemployed,' 'farm labour' and 'self employed.' As mentioned previously, many children, even among those working outside the household, do not receive wages. Their remuneration is often part of a parent's pay. Sometimes children start working without pay in order to obtain a paid position in the enterprise at a later stage.

We also need to look at the concept of non economically active child labourers or non market work which mainly includes housework beyond a certain scale. UNICEF is the only organisation to hve defined an international threshold on four hours or more a day working in the household, the ILO leaves this to be decided nationally. The ILO Zimbabwe survey, for example, sets five hours a day of household work as the threshold for defining child labour.

*Age*

Some information can be taken directly from the definitions: if the child is under 12, and the work is any kind of labor market activity, then the child is a child laborer. But a complete picture needs some additional information on the current legal situation in the country concerned and on how to categorize the information given.

The ILO conventions ask the states to develop comprehensive child labor legislation defining not only the age limits for entering into the labor market but also the type of work that should be considered health threatening for children under 18 years of age. Some types of work listed in the conventions are mentioned in the corresponding recommendations, and others might be added by the states themselves. However, legislation of this type is often very broad, as are the conventions themselves, banning children from undertaking health-threatening work in general.

To know if the legal entry age for full-time labor market work is 14, 15, or 16 years in the country concerned is obviously essential to measure the number of child laborers. Also essential are the entry age for light work and the age for leaving compulsory education if the last is higher than the legal age for entering the labor market. For international benchmarking and statistics, and in cases where the above information is unavailable, the international minimum minimum standards of 14 years of age for full-time labor market work, 12 years for light work, and five years of compulsory education from ages 7 to 12 might be used.

*Health*

How should activities that constitute a threat to a child's health or physical, mental, spiritual, moral, or social development be defined? As mentioned, the ILO convention provides some important guidelines. One statistical and measurement problem is that the health effects of a particular activity will not necessarily occur parallel to undertaking this activity. The type and duration of children's work should therefore be analyzed by using previous experience on what might constitute such a threat. Examples of this could be being away from the parents, especially for younger children, which is often the case of domestic workers. Another example is being denied the opportunity to play (UNICEF, 1997, 24).

In determining the types of work that constitute the worst forms of child labor, consideration should be given, according to ILO Recombination 190, as a minimum, to: (a) work and activities that expose children to physical, psychological or sexual abuse; (b) work underground, under water, at dangerous heights, or in confined spaces; (c) work with dangerous machinery, equipment, and tools, or work that involves the manual handling or transport of heavy loads; (d) work in an unhealthy environment that may, for example, expose children to hazardous substances, agents, or processes, or to temperatures, noise

levels, or vibrations damaging to their health; (e) work under particularly difficult conditions such as for long hours, work at night, or work where the child is unreasonably confined to the premises of the employer.

Children are both more exposed to work-related injuries and illnesses and often less in a position to protect themselves.[12] It is believed that throughout the world, occupational injuries and mortality rates for children exceed those of adults (Graitcer and Lerer, 1998). The fact that children are both easier to discipline and more docile than adults is often a reason given for employing children. Some hazards might apply only to children. Children are more likely to be injured because tools and machinery are not designed for their proportions (Ennew, 1997). Beginning work in childhood also means the individual will have a longer time to be exposed to cumulative hazard. Some children, domestic servants for example, are particularly vulnerable because of their work situation, being at the mercy of their employers and invisible to the outside world. In analyzing the data one should not underestimate the information gained by measuring the child's anticipation of the situation—for example, if he or she is afraid of doing a particular type of work, dislikes some activities more than others, and experiences pain from the work.

*School*

The next important question is whether all children of primary school age who are not in school should by definition be considered child laborers or if this should depend on the type and amount of work they do. Child labor is after all not the only reason for a child's not going to school. All three conventions make special reference to education, however, in their definition of child labor.[13] To link the definition of child labor to education also in statistics can therefore be highly relevant, helping to create meaningful data as a basis for policy

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12 Given that the health effects are so specifically mentioned in the definition of child labor and the belief that many children are exposed to unhealthy working conditions, it is amazing that so few data on the health effects of child labor actually exist. Several facts may explain this lack of data. Occupational heath and safety data are often collected through the workplace. Given that most children working are doing this outside the formal labor market, data on these children may not be collected. Even for those children working in the formal labor market, accidents may not be reported if the child works illegally.

13 For the ILO, the definition of child labor as work interfering with education dates to 1921 and ILO Convention No. 10 on Minimum Age for Admission to Employment in Agriculture . This connection can also be found in national legislation on child labor, all the way back to the first child labor legislation, such as Britain's Factory Act of 1833 (Cunningham 1992, Grimsrud 1997, Wiener 1991).

interventions.

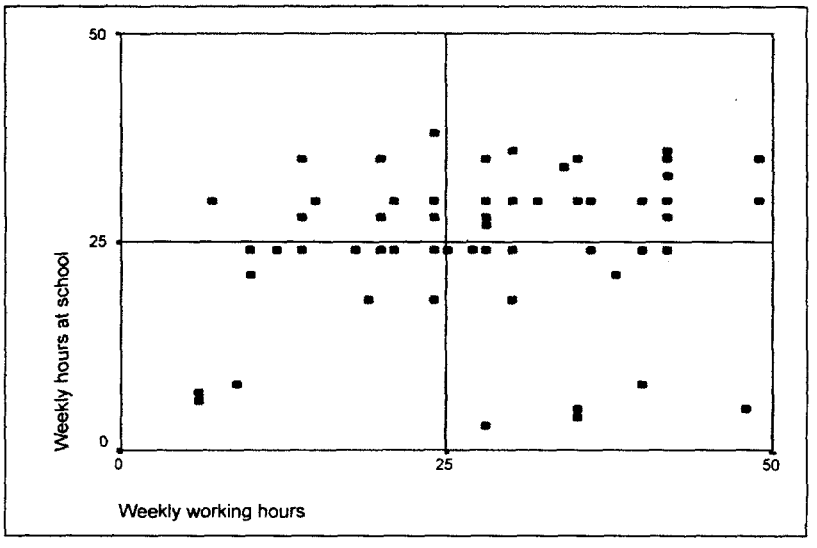
The problem remaining is to define which types and amount of nonschooling activities interfere with education for children under age 14–15. All societies have individuals with very little formal education who have nevertheless been as successful in their working life as those with education. But in general the link between access to education and prosperity in working life is clear. This link brought the part-time school system in 18th-century Britain under fire. The part-time system, where children from poor families could combine school and work, existed from the middle of the 19th century until the beginning of the 20th century. While seen in the beginning as an opportunity for children from poor families, it was in the end found to reproduce poverty more than help children out of it (Cunningham, 1992). The experience and debate around it show how difficult it might be to measure child labor. It took more than a generation to measure the effects of the part-time system.

However, a reasonable critical value for school attendance and workload beside school may be identified based on the local school system. Figure 4, based on data from Yemen, might be used to exemplify this (Grimsrud, 1998a). The figure plots the number of hours spent in school and in working activities including homework.[14] Some children attend school full time (more than 30 hours a week for more than six months of the year), but very many of those who combine school with work spend less than full time at school. Figure 4 identifies at least three groups among those combining school and work. The first is those who attend school full time and work only a limited number of hours (here, less than 25 hours a week). These children are most likely to fall outside the definition of child laborer (those in the upper left part of the diagram), though that is not a given because the nature of the work they perform may be detrimental to their development. The second group is children working very long hours, probably to the detriment of their education. They do fall within the definition of child labor (those in the upper and lower right part of the diagram). The third

**Figure 4:**

14 These data are not based on a household survey but on a case study designed specially for mapping all the different activities of children in different types of work, including housework.

**Weekly time spent by children on school and work (including children working within their own housework).**




group comprises those both working few hours and going to school less than full time (those in the lower left part of the diagram). Apart from possible measuring errors, this pattern might be due to lack of education opportunities. This group will also fall within the definition of child laborer, but these children would probably be integrated into the school system full time if given the opportunity.

**Some elements for extended child labor surveys**

If the resources are available to include a child labor module, a household survey may well be extended beyond mapping the level of child labor to studying both its causes and its consequences. Following are some ideas of what could be included in such a survey.

*Respondent*

Household surveys should be supplemented with interviews of employers and teachers and mapping of the community. If the analysis is to go into the question of critical levels, maybe the children should not be the main source of information, as at present, but rather adults through panel data or more in-depth studies enabling analyses on the long-term effects of early entry into the labor market.

*Education*

More direct measurement of education skills could be included by, for example,

asking the respondent: Can you read and understand everyday written material, such as a letter or newspaper? Can you write, say, a letter to a friend? Some simple variants of a newspaper text should in this case be prepared (in the language used by the household).

More questions helping to determine the cost of schooling for the family are also useful. Questions might include: Did any people who are not members of your household, such as relatives or friends, or any stipends or scholarships from private or public funds help to pay any of your educational costs during the past 12 months? Did you participate in any feeding program or receive any free or subsidized meals at your school? Do you take private lessons in some of the same subjects as your regular education?

To determine the extent of absence one would need to know the opening hours of the school. This could be taken from other sources or one could ask the respondent. How many days has your school been open in the past seven days? How many days have you attended school in the past seven days? If attendance is less than open days, was your absence caused by: sickness or illness, work, or some other reason? It would be ideal to know about all absences during the entire school year and even past years. Absence during the previous week is a very rough indicator of the necessary information, but it is unlikely that children or their parents will be able to recall accurately absences over a longer period of time.

A question about means of transportation might be added: How do you get to school? By walking, bicycle, public transport, private transport, or other means?

One reason for dropping out of school has been found to be lack of correspondence between the school year and the time when children are needed most to work in agriculture. A more flexible approach from school here might mean that children do not drop out. A question could be: Does the school calendar follow local agricultural seasons?

Some questions on the quality of the education could be added, including: How many classes are there at your school? How many teachers are there at your school? Describe the facilities where the schooling takes place.

*Work*

A standard labor force survey would include the questions: Did you want to work (more) during the past week (past seven days)? And: Did you actively search for (more) work during the past week (past seven days)? These two standard labor market participation

measurement questions might be seen as irrelevant to at least the younger children, but they still could say something about the relation between work and education and therefore could be included.

Most children seem to be recruited into the labor market by their parents or other close relatives. Several surveys do indicate that children working under the guardianship of their parents have less harsh working conditions than others. To map this one could ask: How did you get this job? Response options would include: my father; my mother; other relatives; friends of my parents/guardians; my friends; I actively went and looked for jobs; or other ways. Do you work under the supervision of a member of your household (specify), under the supervision of an employer, or without supervision? Do you work together with a close household member? Do you give part or all of your earnings to your parents/guardians or other relatives you usually reside with?

The migration status, where the children have been working and for how long, the reasons why they work, their own immediate and future plans and those of employers using child workers may also be included and also questions like: Do you believe that your work will increase the possibilities of getting other jobs in the future?

*Other issues*

In an extended survey, infrastructure (or the lack of it) that influences the opportunity cost of children's time might also be important to capture. This might include rural infrastructure, agricultural extension, and childcare facilities. For example, providing a source of potable water to a rural community may reduce the opportunity cost of children's time, particularly that of girls, because they no longer need to walk long distances to obtain water for their families.

A lot of information can be captured through mapping the perceptions of the children themselves and their parents. In other sections of the household survey the perception of the parents about work and education for their children could be mapped: How do they explain the reasons why their children have to work? How do they perceive the value of education? Do they differentiate between their boys and girls regarding the need for education and the duties at home? The child could be asked: What would be fun to do if you were not working? Going to school, playing, watching TV, listening to the radio, doing nothing? This type of

question, by looking at the child's aspirations (or lack thereof), helps to understand some of the child's present situation.

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## APPENDIX I:

## INTERNATIONAL CONVENTIONS DEFINING CHILD LABOR

### ILO Convention 138 on minimum age for employment

"Each Member for which this Convention is in force undertakes to pursue a national policy designed to ensure the effective abolition of child labor and to raise progressively the minimum age for admission to employment or work to a level consistent with the fullest physical and mental development of young persons.

Each member which ratifies this Convention shall specify a minimum age for admission to employment or work. The minimum age specified shall not be less than the age of completion of compulsory schooling and shall not be less than 15 years.

Countries whose economy and educational facilities are insufficiently developed may initially specify a minimum age of 14 years.

The minimum age for admission to any type of employment or work which by its nature or the circumstances in which it is carried out is likely to jeopardize the health, safety or morals of young persons shall not be less than 18 years.

National laws or regulations may permit the employment or work of persons 13 to 15 years of age on light work which is not likely to be harmful to their health or development; and not such as to prejudice their attendance at school [and] their participation in vocational training. National laws or regulations may also permit the employment or work of persons who are at least 15 years of age but have not yet completed their compulsory schooling. [The Convention does not apply to work done by children and young persons in schools for general, vocational or technical education or in other training institutions.]"[15]

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15 Countries may exclude from the application of the Convention limited categories of employment or work in respect of which special and substantial problems of application arise. However, the provisions of the Convention shall be applicable as a minimum to the following: mining and quarrying; manufacturing; construction; electricity, gas and water; sanitary services; transport, storage and communication; and plantations and other agricultural undertakings mainly producing for commercial purposes, but excluding family and small-scale holdings producing for local consumption and not regularly employing hired workers.

Only 64 countries had ratified this convention by September 1998. Another 30 have indicated that they will do so. However, the convention is a part of the "core conventions," the principles of which the ILO in its 1998 annual meting declared that every member had an obligation to respect arising from the very fact of membership in the organization.

**UN Convention on the Rights of the Child (CRC)**

Article 32 in the UN Convention on the Rights of the Child states that: "States Parties recognize the right of the child to be protected from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral or social development. States Parties shall take legislative, administrative, social and educational measures to ensure the implementation of the present article. To this end, and having regard to the relevant provisions of other international instruments, States Parties shall in particular: (a) Provide for a minimum age or minimum ages for admissions to employment; (b) Provide for appropriate regulation of the hours and conditions of employment; (c) Provide for appropriate penalties or other sanctions to ensure the effective enforcement of the present article."

This means that the child has the right to be protected from work that threatens his or her health, education, or development. A child in the CRC is defined as under the age of 18. However, a country shall under the convention define special minimum ages for employment and shall regulate working conditions. The relevant provisions in other international instruments have been generally interpreted by the UN Committee for the Rights of the Child as being ILO Convention 138. All UN member states except Somalia and the United States have ratified this convention.

**ILO Convention 182 on the Worst Forms of Child Labor**

The ILO adopted in 1999 new standards on the worst forms of child labor with the following definitions: "Child" is intended to apply to all persons under the age of 18, and "the worst forms of child labor" shall comprise all forms of slavery or practices similar to slavery, such as the sale and trafficking of children, debt bondage and serfdom, and forced or compulsory labor, including forced or compulsory recruitment of children for use in armed

conflict;

- using, procuring, or offering a child for prostitution, for the production of pornography, or for pornographic performances;
- using, procuring, or offering a child for illegal activities, in particular for the production and trafficking of narcotic drugs as defined in the relevant international treaties;
- work which, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety or morals of children

Even if the labor market approach is recognizable in this proposal, it is noteworthy that the ILO is referring to a human rights convention where no sector or activity is excluded. This indicates a new approach from the ILO, where work undertaken within the child's own home may be of a kind that qualifies as the worst forms of child labor according to the definition in this convention.

## APPENDIX II:

## TIME USE

Time-use data can be collected by a variety of instruments. The most basic of these are direct questions about how much time children spend on specific activities. They are often asked in the forms, "How often do you . . . ?" "About how many hours a week do you spend . . . ?" "When was the last time you . . . ?" Questions may be asked of parents, of children, or of both. The advantage of this method is that there are already many instruments that have been developed and tested in previous surveys, and it is very cost effective. The disadvantage is that it is necessary for the researcher to know before designing the measurement instrument exactly what activities are to be examined.

**Time diary**

A time diary is perhaps a better way to capture all the data required for analyzing time allocation. The primary purpose of a time-use diary is to collect valid and reliable data on the respondents' participation in and time spent on activities. Harvey and Taylor (1997) describe three prototypes of time-use diaries:

1. Stylized Activity List. This instrument is designed to gather data on participation and duration rates for a short suggested list of activities. The listed activities must relate to a viable and internationally comparable set of activities and must capture all of the respondent's activities during a given day.
2. Stylized Activity Log. The second instrument proposed is an improvement on the first because it captures episodes, the basic building blocks of time use. This approach requires the respondent to think through the day and to identify transitions from activity to activity. From this, it is possible to understand how an individual's day is organized. It is this recall process that makes the responses about time use in this log more accurate and informative than in the list. If, as recommended, diaries are obtained from all or most members of the family, it should be possible to study the trade-offs that are made within the household. Note that stylized questions (whether in the list or the log form) yield information

for the most frequently used time use indicators, in other words, participation and duration.

3. Open-Interval Time Diary. This instrument has all of the advantages of the previous diaries plus much better recall guidance, better data recording, and significantly more information. The improvement in the recall guidance comes from respondents' being asked to recall their day in much more detail than in the log. Being asked about where they went and with whom triggers respondents' memories about the activities they performed. Data recording is improved because the answers are given in the respondents' own words, with no input from the interviewer. Following the completion of the survey, the responses are coded by trained coders. This enhances both the validity of categorization and, more important, the reliability of the database. Finally, far more detail is provided in the open-interval diary than in the activity list or log, especially in its providing more detail on the context in which activities occur, in other words, with what other activity, where, and with whom

Ideally, a diary should collect data on a primary activity, on secondary activities, on whom the respondent was with during the activities, for whom the respondent carried out the activity, and the location of the activity. Distinguishing between primary and secondary activities may not in all cases be straightforward. If a child is playing and taking care of siblings, both activities could be primary or secondary. For the purpose of mapping child labor in developing countries, measuring primary activities is a challenge in itself, and adding secondary activities could stretch too far. The above example shows, however, that the analyst needs to be aware of these questions and through training and the field manual to make sure that the interviewers apply the same basic way of measuring.

In the United States (Harding, 1997) time-use studies on children have been undertaken using a technique where the children themselves, or with help from their parents, kept time diaries of their activities as they occurred. Problems with this method have included that some children are more specific than others about what exactly they are doing, making comparison problematic, and that older and younger children use the same term to mean very different things. Time-use researchers are in general increasingly interested in

obtaining information on the subjective dimensions of recorded activities. The importance of this has been highlighted by Shaw (1985), who found that men and women classify the same activities differently as either work or leisure and that some individuals may well classify an activity as work at one time and as leisure at another. Michelson (1984) also makes a strong case for the inclusion of subjective dimensions as an integral part of the time budget. Such information would be useful in developing indicators and in understanding real or apparent leisure activity. Traditionally in developing countries, time-use data have been collected by means of observation approaches (Harvey and Taylor, 1997).

The retrospective time-diary method requires only one visit, in which the interviewer and the subject fill out the time diary together for the previous day's activities with the aid of a chart or timeline. The advantage of the retrospective method is that it does not influence the behavior of the respondent and that the interviewer does the recording. The disadvantages are obviously that it relies on children's memories and that the interview can last up to one and a half to two hours (Harding 1997). In an already packed household survey, this may therefore not always be a feasible option.

As debated above one of the most difficult sides of using a retrospective dairy methodology is to get the child and or the mother to recall the activities undertaken in the past week. To overcome this one might take several steps.

First, it seems better to ask the child/mother to describe the different activities on a given day instead of describing the time devoted to a given activity.

Second, the day should be divided according to the normal family routines. This could be from waking up until lunch, from lunch to the normal time for ending work, and from the end of work to bedtime. Many countries have the primary schools operating in two shifts. If so, this is a very useful pattern. The time diary should be drawn up accordingly, with the morning ending when the first shift ends school and the afternoon covering the time of the second shift attending school. The time covered by each of the parts of the day need not be of equal length. The reference week may also be defined so that it starts on the first day of the working week (Monday or Saturday) and ends on the weekend (Sunday–Friday). It is a good way of approaching the child, mapping the main structures first as he or she attends school in the morning the first five days of the week, and so on. Third, the types and details of the

activities mapped should be as simple as possible. Only the general type of the activity and only activities that last for some time should be mapped. Time spent on traveling to and from work or school could be included in the time spent on these activities. This could be combined with separate questions on the time spent traveling. The exceptions from this are the cases were traveling time is exceptionally long and an issue in itself, like the children working in the match industry in Siwakasi in India, or children having to travel very far to attend school.

Combined with the questions above on the type of work one can limit the different activities to only six different groups:

1. attending school;
2. Doing home work;
3. Working in the household , helping the family (cooking, taking care of sibling, fetching water and wood);
4. Working (on the family land, at a family enterprise, outside the family);
5. Playing, reading books, watching TV, and other recreational activities;
6. Being sick at home or in the hospital, visiting the doctor, or undergoing medical treatment.

## Time-use diary

| Describe your activities during the past week : | | | |
|---|---|---|---|
| Day of week | Morning 06-07-08-09-10-11 | Afternoon 12-13-14-15-16-17 | Evening 18-19-20-21-22-23 |
| Day 1 | \|__\|__\|__\|__\|__\|__\| | \|__\|__\|__\|__\|__\|__\| | \|__\|__\|__\|__\|__\|__\| |
| Day 2 | \|__\|__\|__\|__\|__\|__\| | \|__\|__\|__\|__\|__\|__\| | \|__\|__\|__\|__\|__\|__\| |
| Day 3 | \|__\|__\|__\|__\|__\|__\| | \|__\|__\|__\|__\|__\|__\| | \|__\|__\|__\|__\|__\|__\| |
| Day 4 | \|__\|__\|__\|__\|__\|__\| | \|__\|__\|__\|__\|__\|__\| | \|__\|__\|__\|__\|__\|__\| |
| Day 5 | \|__\|__\|__\|__\|__\|__\| | \|__\|__\|__\|__\|__\|__\| | \|__\|__\|__\|__\|__\|__\| |
| Day 6 | \|__\|__\|__\|__\|__\|__\| | \|__\|__\|__\|__\|__\|__\| | \|__\|__\|__\|__\|__\|__\| |
| Day 7 | \|__\|__\|__\|__\|__\|__\| | \|__\|__\|__\|__\|__\|__\| | \|__\|__\|__\|__\|__\|__\| |

**Module in ILO questionnaires**

The ILO used the following questionnaire:

Ask and record the time (in hours) spent on each day of the past three days on the following activities.

| Activity | Day | Total |
|---|---|---|
| | 1-2-3 | |

Regular Employment in

501. Crop production

502. Other agricultural activities

503. Nonagricultural activities

Casual Labor in

504. Crop production

505. Other agricultural activities

506 Nonagricultural activities

Self Employment/Unpaid HH Labor in

507. Crop production (including orchards and plantation)

508. Animal husbandry

509 Fishing

510. Other agricultural activities

511. Non-agricultural activities

Free Collection of:

512. Fire wood and other fuel

513. Fodder

514 Fish

515. Other agricultural products

516. Mining products

517. Non-agricultural products for sale

518. Processing of agricultural produce

Other Activities

519 Attending school

520 At studies

521 Playing games

522.* Enjoying holiday with regular employment

523.* Enjoying holiday with work in household enterprise

524.* Enjoying holiday but a student

525. Attending to household duties and also available for work

526. Attending to household duties and not available for work

527. Engaged in other activities and also available for work

528. Engaged in other activities and not available for work

529. Begging

530 Attending to personal care

531. Sleeping

532. Illness with regular employment

533. Illness with work in household enterprise

534. Illness but was to attend school

535. Illness others (otherwise available for work)

536. Illness (otherwise idle)

Any other activity

* Account for the time that otherwise would have been spent if not enjoying holiday

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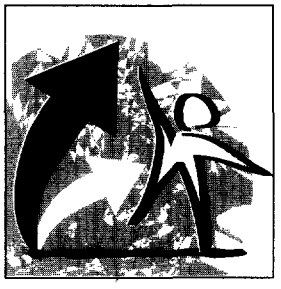

## Summary Findings

Current statistics on child labor are generally based on economically active children. This paper will argue that these figures are not a workable proxy for data on child labor, generating numbers of child laborers and their gender composition that do not represent the group described by the international definition of child labor. This raises the question of reliable alternative ways of measuring children's activities with the aim of analyzing the incidence of child labor. The paper addresses this and proposes a child labor module that can be linked to surveys of labor force or living conditions. It also proposes some ideas for how to analyze data on children's activities and child labor.

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